

signal subsequent to amplification by the amplifier, said distortion estimator for estimating an indicia of distortion of the send signal due to amplification thereof by the amplifier and for providing a distortion estimate signal to said phase rotator, values of the distortion estimate signal determinative of rotation by said phase rotator of the phase component of the send signal.

REMARKS

In the above-mentioned Office Action, claims 1-5, 8, and 10-18 were rejected. Claims 1-5, 8, 11, and 13-18 were rejected under Section 103(a) over the combination of Persson and Carson. Claim 10 was rejected under Section 103(a) over the combination of Persson, Carsson, and McNicol. Claim 12 was rejected under Section 112, second paragraph. Claims 6, 7, 9, 19, and 20 were acknowledged to recite allowable subject matter. But objection was made to such claims for being dependent upon rejected parent claims. And, objection was also made to an informality contained in claim 1.

The Applicant gratefully acknowledges the Examiner's indication of allowable subject matter of claims 6, 7, 9, and 19-20.

Claim 1 is amended, as set forth herein, to include the recitations of claim 9, and its intervening claim 8. Claim 13 is amended, as set forth herein, to include the recitations of claim 19, and intervening claims 15-18. And, new claim 21, also set forth herein, places the recitations of claim 6, together with its intervening claims, in independent form. Claim 1 is further amended

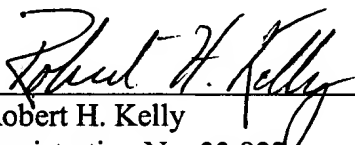
in a manner believed to overcome the Examiner's objection thereto. And, claim 12 is amended to overcome the Section 112 rejection thereof. Amendments made to remaining ones of the claims are made responsive to amendments made to their respective parent claims.

In light of the foregoing, independent claims 1 and 13, amended as set forth herein, the dependent claims dependent thereon, and newly-proposed claim 21 are believed to be in condition for allowance. Accordingly, re-examination and reconsideration for allowance of the claims is respectfully requested. Such early action is earnestly solicited.

Respectfully submitted,

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APPENDIX A

Amended paragraphs of the specification, marked to show changes:

1. (Amended) In a sending station operable to transmit a send signal, once amplified by an amplifier, the send signal formed of successive symbols, each symbol selected from a constellation of symbols, an improvement of apparatus for compensating for distortion introduced upon the send signal when amplified by the amplifier, said apparatus comprising:

a phase rotator coupled to receive indications of the send signal prior to amplification by the amplifier, said phase rotator for selectably rotating a phase component of the send signal; and

a distortion estimator coupled to receive the indications of the send signal prior to amplification by the amplifier and to receive indications of the send signal subsequent to amplification by the amplifier, [and to receive indications of the send signal subsequent to amplification by the amplifier,] said distortion estimator for estimating an indicia of distortion of the send signal due to amplification thereof by the amplifier, the indicia of distortion related to differences determined between values of the symbols, prior to amplification by the amplifier and subsequent to amplification by the amplifier and for providing a distortion estimate signal to said phase rotator, values of the distortion estimate signal determinative of rotation by said phase rotator of the phase component of the send signal.

12. (Amended) The apparatus of claim 11 wherein the sending station forms a portion of a radio transceiver operable in a CDMA (code-division, multiple-access) cellular communication system, wherein each QPSK symbol includes a phase component and a magnitude component, and wherein rotation of the phase component caused by

said phase rotator alters the phase component of the QPSK symbol without altering the [phase] magnitude component of the QPSK symbol.

13. In a method for sending a send signal, once amplified by an amplifier, at a sending station, an improvement of a method for compensating for distortion introduced upon the send signal when amplified by the amplifier, said method comprising:

characterizing an AM (Amplitude Modulation)-to-PM (Phase Modulation) response of the amplifier, the AM-to-PM response of the amplifier defining a phase distortion characteristic of the send signal, the phase distortion characteristic of a substantially constant level when an input power level of the send signal is less than a first threshold;

estimating an indicia of distortion of the send signal due to amplification thereof by the amplifier and a value of the input power level of the send signal; and

selectably rotating a phase component of the send signal responsive to the [indicia of distortion] value of the at least the phase distortion characteristic of the send signal [estimated during said operation of estimating].

20. (Amended) The method of claim [19] 13 wherein the phase distortion characteristic is proportional to the input power level of the send signal when the input power level is at least as great as the first threshold.

21. (New) In a sending station operable to transmit a send signal, once amplified by an amplifier, an improvement of apparatus for compensating for distortion introduced upon the send signal when amplified by the amplifier, said apparatus comprising:

a phase rotator coupled to receive indications of the send signal prior to amplification by the amplifier, said phase rotator for selectably rotating a phase component of the send signal

responsive to a characterization of an AM (Amplitude Modulation)-to-PM (Phase Modulation) responsive of the amplifier that defines a phase distortion characteristic of the send signal, the phase distortion characterization of a substantially constant level when the send signal is less than a first threshold; and

a distortion estimator coupled to receive the indications of the send signal prior to amplification by the amplifier and to receive indications of the send signal subsequent to amplification by the amplifier, and to receive indications of the send signal subsequent to amplification by the amplifier, said distortion estimator for estimating an indicia of distortion of the send signal due to amplification thereof by the amplifier and for providing a distortion estimate signal to said phase rotator, values of the distortion estimate signal determinative of rotation by said phase rotator of the phase component of the send signal.